

Initial Experience with Retrograde Over-tube Assisted Enteroscopy Using a Spiral Tip Over-tube (ROAE-Spiral)

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Abstract

INTRODUCTION: Over-tube assisted endoscopy using single or double balloon tip or spiral tip over-tubes have improved our ability to perform diagnostic and therapeutic enteroscopy as deeper insertion and even pan-endoscopy are possible. The distal small bowel may require a retrograde approach through the ileo-cecal valve. The colon spiral-tip over-tube, developed to straighten the sigmoid, has been used successfully for this purpose.

AIMS & METHODS: To report on the initial experience with retrograde over-tube assisted enteroscopy using a spiral tip over-tube. OAE spiral became available at our institution in May 2008, but use had been limited to antegrade enteroscopy. Colon prototypes, and now the commercially available spiral tip over-tube for colon intubation were used at our institution for retrograde enteroscopy. The colon over-tube has a larger working diameter compared to the small bowel over-tube, so a variety of endoscopes can fit through it (see table below). The endoscope was advanced beyond the splenic flexure until a straight loop of bowel was encountered. The spiral tip over-tube was then inserted over the scope and advanced by using clock-wise rotation through the rectum. If the cecum was not reached the endoscope was pushed through the over-tube to the cecum. Reductions were attempted at this point. The ileocecal valve was intubated, and the endoscope advanced into the ileum. The endoscope was then withdrawn into the cecum and removed together with the over-tube by counter-clockwise rotation. Olympus pediatric colonoscopes (PCF Q160) and Olympus enteroscopes (SIF Q 140, and CO2 insufflation where used. Sedation was achieved with propofol. Fluoroscopy was not used.

RESULTS: 6 retrogrades colonoscopies using OAE-spiral have been performed (see Table). All achieved deep intubation of the ileum, and one pan-endoscopy was achieved. Therapy was performed in 3/6 patients. Average procedure time was 52.5 min and average depth of insertion was 75 cm from the IC valve. There were no complications. TABLE 1: Results of retrograde over-tube assisted enteroscopy with the OAE-spiral.

Age/Sex	Indication	Procedure Time	Type of Endoscope	Diagnosis	Therapy	Depth of Insertion*
1. 51 f	Polyps	43 min	PCFQ160	IC Valve polyp	Snare polypectomy	40 cm
2. 28 f	CF-Dios ^b	50 min	SIF Q140	Succus obstruction	PEG and NAC ^b infusion	70 cm
3. 67 f	Recurrent small bowel obstruction	68 min	PCF Q160 and SIF Q140	Ileal anastomotic stricture	Balloon dilation	130 cm
4. 40 f	Occult GI bleeding	65 min	SIF Q160	Normal	None	100 cm
5. 27 f	Abnormal CT scan	28 min	PCF Q160	Normal	None	40 cm
6. 85 m [#]	Occult GI bleeding	61 min	SIF Q140	Normal	None	70 cm

*from ileocecal valve; ^bcystic fibrosis-distal intestinal obstruction syndrome, polyethylene glycol and n-acetyl-cysteine [#]pan-endoscopy achieved

CONCLUSION: Retrograde enteroscopy using OAE-spiral is successful at achieving deep intubation of the small bowel. Pan-endoscopy is also possible, and may become more frequent as equipment and technique improves. This method is diagnostic but also allows for therapeutic intervention of the small bowel. More studies are needed to identify the best application of the procedure.